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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,201	07/03/2006	Akimasa Yuuki	293181US2PCT	9973
22850 7590 04/02/2009 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER AMADEZ, RODNEY				
ART UNIT 2629		PAPER NUMBER		
NOTIFICATION DATE 04/02/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/585,201

Applicant(s)

YUUKI ET AL.

Examiner

RODNEY AMADIZ

Art Unit

2629

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 13 is/are rejected.
- 7) ☒ Claim(s) 11 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S508)
- Paper No(s)/Mail Date 7/3/06
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5, 7, 10 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Liu (USBPUB 2005/0046765—hereinafter "Liu").

As to **Claim 1**, Liu teaches a liquid crystal display (**Fig. 2**) including a liquid crystal panel having two screens (**Pg. 1, ¶ 25**), a first front light (**10**) placed in a vicinity of one of the two screens of said liquid crystal panel (**See Fig. 2**), a second front light (**24**) placed in a vicinity of the other one of the two screens of said liquid crystal panel (**See Fig. 2**), and a pixel driving circuit for driving pixels of said liquid crystal panel to display an image on said liquid crystal panel (**Pg. 1, ¶ 25 and Pg. 2, ¶ 35 the driving circuit is not shown but is inherently present in order to drive the pixels**), characterized in that said pixel driving circuit alternately displays a first image and a second image on said liquid crystal panel (**Pg. 1, ¶ 25 and Pg. 2, ¶ 35**), and said first

front light lights up while the first image is displayed on said liquid crystal panel by said pixel driving circuit, and said second front light lights up while the second image is displayed on said liquid crystal panel by said pixel driving circuit (**Pg. 1, ¶'s 10, 25 and Pg. 2, ¶ 35**).

As to **Claim 2**, Liu teaches that when displaying the first or second image on the liquid crystal panel, the pixel driving circuit applies image data about the image to be displayed on the liquid crystal panel to a plurality of gate lines of the liquid crystal panel in turn, and the first or second front light lights up after the image data has been applied to all the gate lines (**Pg. 1, ¶'s 10, 25 and Pg. 2, ¶ 35—note that this is a active matrix TFT and gate lines are inherent to active matrix LCDs**).

As to **Claim 3**, Liu teaches a case where each of the first and second front lights includes a plurality of light sources (**See Figs. 3B and 3C**), when displaying the first or second image on the liquid crystal panel, the pixel driving circuit applies image data about the image to be displayed on the liquid crystal panel to a plurality of gate lines of the liquid crystal panel in turn to cause the plurality of light sources which respectively correspond to the plurality of gate lines to light up in order that the image data is applied to the plurality of gate lines (**Pg. 1, ¶'s 10, 25 and Pg. 2, ¶ 35—note that this is a active matrix TFT and gate lines are inherent to active matrix LCDs**).

As to **Claim 4**, Liu teaches that the liquid crystal panel includes a liquid crystal cell (**14**) having the plurality of pixels (**Pg. 2, ¶ 30**), a pair of transparent glass substrates which sandwich said liquid crystal cell (**See Fig. 2**), and a pair of polarizing plates (**12 and 18**) placed outside said pair of transparent glass substrates.

As to **Claim 5**, Liu teaches a liquid crystal layer which constitutes the liquid crystal panel has a bend alignment (**Pg. 2, ¶ 30—inherent to liquid crystals displays in order not to let light pass through**).

As to **Claim 7**, Liu teaches a liquid crystal layer which constitutes the liquid crystal panel has a substantially-parallel alignment (**Pg. 2, ¶ 30—inherent to liquid crystals displays in order to allow to light to pass through**).

As to **Claim 10**, Liu teaches that a direction in which light is emitted out of each of the first and second front lights is inclined with respect to a direction perpendicular to the liquid crystal panel (**See Fig. 7A and 7B**), and the direction in which light is emitted out of the first front light differs from the direction in which light is emitted out of the second front light (**See Fig. 7A and 7B**).

As to **Claim 13**, Liu teaches an information equipment provided with a liquid crystal display (**Fig. 2**) in which a first front light (**10**) is placed on a vicinity of one of two screens (**Pg. 1, ¶ 25**) of a liquid crystal panel, a second front light (**24**) is placed on a vicinity of the other one of the two screens of said liquid crystal panel (**See Fig. 2**), and a pixel driving circuit for driving pixels of said liquid crystal panel to display an image on said liquid crystal panel is disposed (**Pg. 1, ¶ 25 and Pg. 2, ¶ 35 the driving circuit is not shown but is inherently present in order to drive the pixels**), and an image controller for outputting image data about the image which is to be displayed on said liquid crystal panel to said pixel driving circuit (**Pg. 1, ¶ 25 and Pg. 2, ¶ 35 the image controller is not shown but is inherently present in order to control the driving circuits**), characterized in that when receiving image data about a first image and

image data about a second image from said image controller, said pixel driving circuit alternately displays the first and second images on said liquid crystal panel, and said first front light lights up while the first image is displayed on said liquid crystal panel by said pixel driving circuit, and said second front light lights up while the second image is displayed on said liquid crystal panel by said pixel driving circuit (***Pg. 1, ¶'s 10, 25 and Pg. 2, ¶ 35***).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu.

As to **Claims 6 and 9**, Liu fails to teach that a circular polarizing plate is placed outside a TFT substrate which constitutes the liquid crystal panel. The Examiner takes Official Notice that circular polarizing plates are old and well-known in the art. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate a circular polarizing plate in the liquid crystal display device taught by Liu in order to help reduce reflections.

As to **Claim 8**, Liu fails to teach that a material of the liquid crystal layer has refractive index anisotropy which falls within a range of 0.1 to 0.2, and the liquid crystal

layer has a birefringence value which falls within a range of 350 nm to 550 nm. The Examiner takes Official Notice that these ranges well-known in the liquid crystal display art. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to manufacture the liquid crystal layer with the ranges as claimed in order to allow light to travel through the liquid crystal layer properly.

Allowable Subject Matter

6. Claims 11 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to Claim 11, the prior art fails to teach or suggest, either alone or in combination "that the direction in which light is emitted out of each of the first and second front lights is inclined toward an upward or downward direction by a certain angle of 5 to 10 degrees with respect to the direction perpendicular to the liquid crystal panel, and the direction in which light is emitted out of the first front light differs from the direction in which light is emitted out of the second front light by a certain angle of 10 to 20 degrees."

As to Claim 12, the prior art fails to teach or suggest, either alone or in combination "in that the direction in which light is emitted out of each of the first and second front lights is inclined toward a direction opposite to a direction of a light source of each of the first and second front lights by a certain angle of 5 to 10 degrees with respect to the direction perpendicular to the liquid crystal panel, and the direction in

which light is emitted out of the first front light differs from the direction in which light is emitted out of the second front light by a certain angle of 10 to 20 degrees."

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kim et al. USPGPUB 2004/0183960

Kim et al. USPGPUB 2004/0246412

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RODNEY AMADIZ whose telephone number is (571)272-7762. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sumati Lefkowitz/
Supervisory Patent Examiner, Art Unit 2629

/R. A./
Examiner, Art Unit 2629
3/24/09